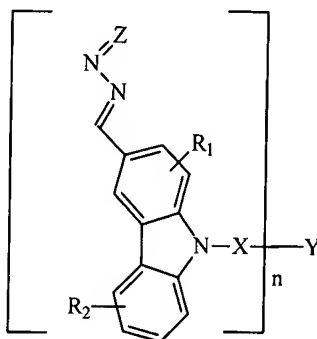


CLAIMS

What is claimed is:

1. An organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising:

(a) a charge transport material having the formula



where n is an integer between 2 and 6, inclusive;

R₁ and R₂ are, independently, H, halogen, carboxyl, hydroxyl, thiol, cyano, nitro, aldehyde group, ketone group, an ether group, an ester group, a carbonyl group, an alkyl group, an alkaryl group, or an aryl group;

X is a linking group having the formula -(CH₂)_m-, branched or linear, where m is an integer between 0 and 20, inclusive, and one or more of the methylene groups can be optionally replaced by O, S, C=O, O=S=O, urethane, urea, an ester group, a NR₃ group, a CHR₄ group, or a CR₅R₆ group where R₃, R₄, R₅, and R₆ are, independently, H, an alkyl group, an alkaryl group, a heterocyclic group, or an aryl group;

Y comprises a bond, C, N, O, S, a branched or linear -(CH₂)_p- group where p is an integer between 0 and 10, an aromatic group, a cycloalkyl group, a heterocyclic group, or a NR₇ group where R₇ is hydrogen atom, an alkyl group, or aryl group, wherein Y has a structure selected to form n bonds with the corresponding X groups; and

Z is a fluorenylidene group; and

(b) a charge generating compound.

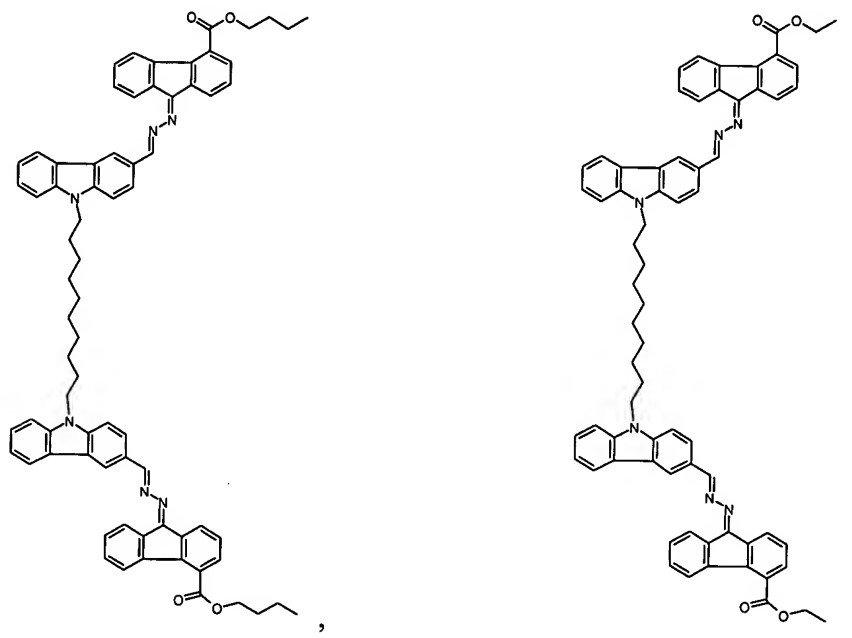
2. An organophotoreceptor according to claim 1 wherein Y is a bond and X is a -(CH₂)_m- group where m is an integer between 1 and 20.

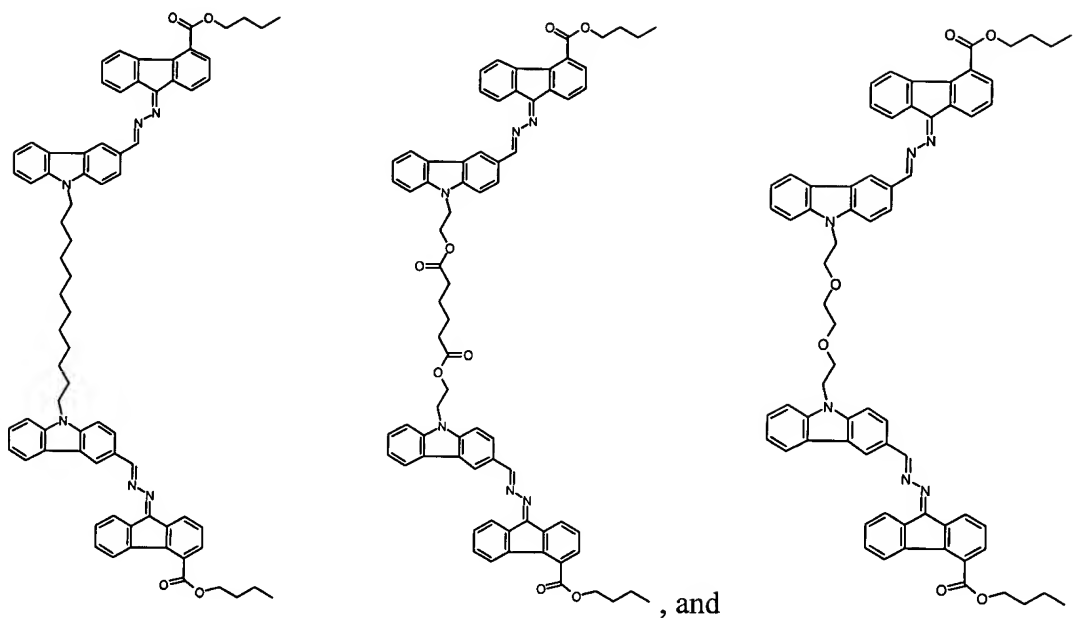
3. An organophotoreceptor according to claim 1 wherein Z is an alkoxy carbonyl-9-fluorenylidene group.

5 4. An organophotoreceptor according to claim 3 wherein the alkoxy group in the alkoxy carbonyl-9-fluorenylidene group contains 1 to 20 carbon atoms.

5. An organophotoreceptor according to claim 1 wherein the charge transport material has a formula selected from the group consisting of the following:

10





6. An organophotoreceptor according to claim 1 wherein the photoconductive element further comprises a second charge transport material.

5

7. An organophotoreceptor according to claim 6 wherein the second charge transport material comprises a charge transport compound.

8. An organophotoreceptor according to claim 1 wherein the photoconductive element further comprises a binder.

10

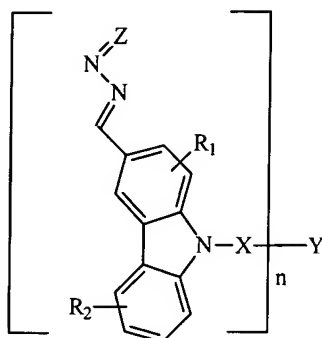
9. An electrophotographic imaging apparatus comprising:

(a) a light imaging component; and

(b) an organophotoreceptor oriented to receive light from the light imaging component, the organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising

15

(i) a charge transport material having the formula



where n is an integer between 2 and 6, inclusive;

R₁ and R₂ are, independently, H, halogen, carboxyl, hydroxyl, thiol, cyano, nitro, aldehyde group, ketone group, an ether group, an ester group, a carbonyl group, an alkyl group, an alkaryl group, or an aryl group;

X is a linking group having the formula $-(CH_2)_m-$, branched or linear, where m is an integer between 0 and 20, inclusive, and one or more of the methylene groups can be optionally replaced by O, S, C=O, O=S=O, urethane, urea, an ester group, a NR₃ group, a CHR₄ group, or a CR₅R₆ group where R₃, R₄, R₅, and R₆ are, independently, H, an alkyl group, an alkaryl group, a heterocyclic group, or an aryl group;

Y comprises a bond, C, N, O, S, a branched or linear $-(CH_2)_p-$ group where p is an integer between 0 and 10, an aromatic group, a cycloalkyl group, a heterocyclic group, or a NR₇ group where R₇ is hydrogen atom, an alkyl group, or aryl group, wherein Y has a structure selected to form n bonds with the corresponding X groups; and

Z is a fluorenylidene group; and

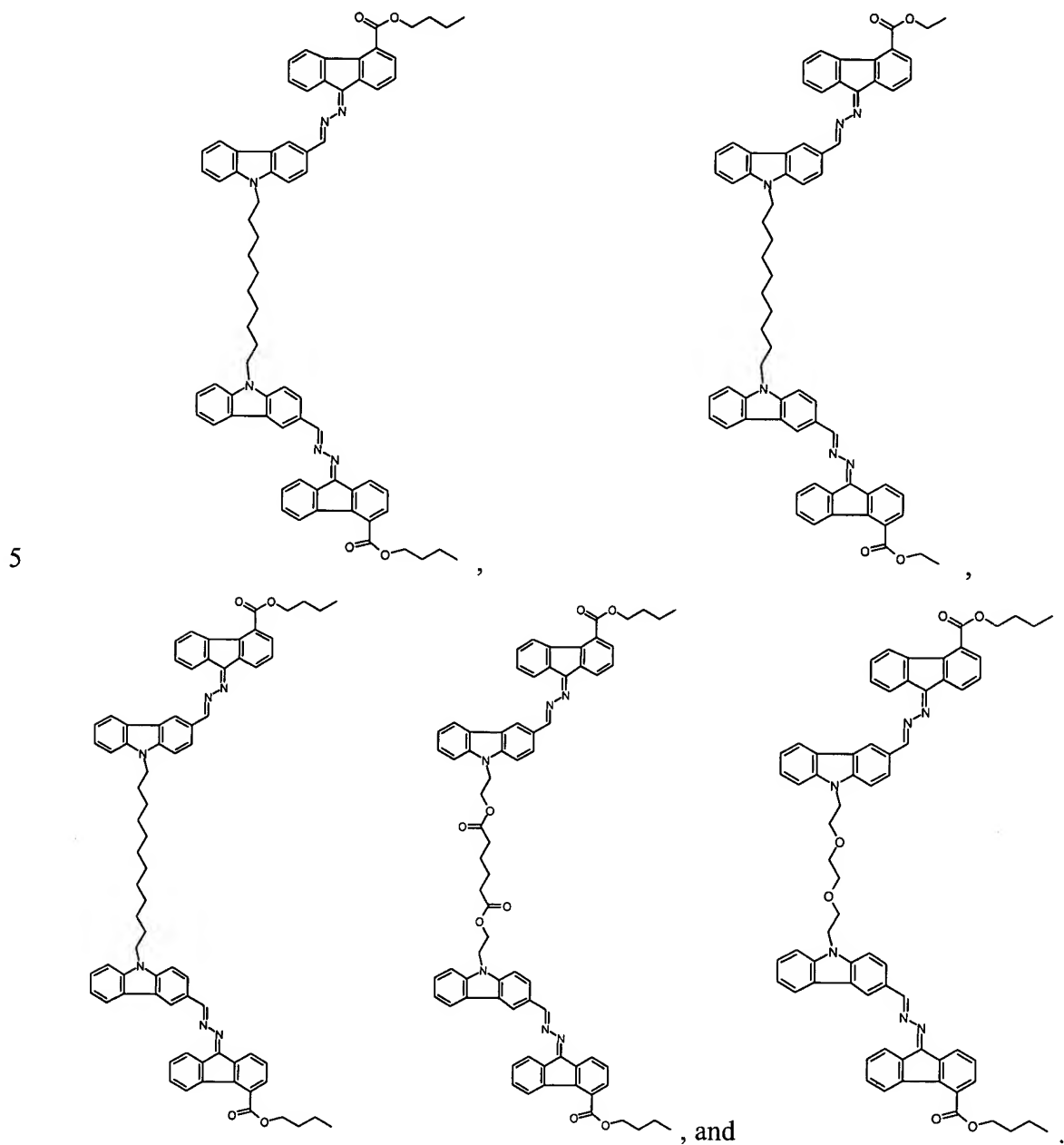
(ii) a charge generating compound.

10. An electrophotographic imaging apparatus according to claim 9 wherein Y is a bond and X is a $-(CH_2)_m-$ group where m is an integer between 1 and 20.

11. An electrophotographic imaging apparatus according to claim 9 wherein Z is an alkoxycarbonyl-9-fluorenylidene group.

12. An electrophotographic imaging apparatus according to claim 11 wherein the alkoxy group in the alkoxycarbonyl-9-fluorenylidene group contains 1 to 20 carbon atoms.

13. An electrophotographic imaging apparatus according to claim 9, wherein the charge transport material has a formula selected form the group consisting of the following:



14. An electrophotographic imaging apparatus according to claim 9 wherein the photoconductive element further comprises a second charge transport material.

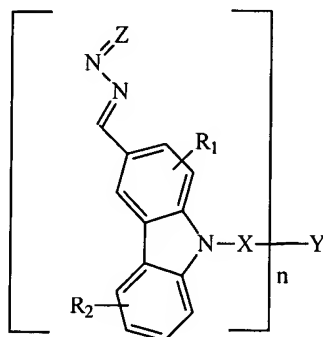
15. An electrophotographic imaging apparatus according to claim 14 wherein second charge transport material comprises a charge transport compound.

16. An electrophotographic imaging apparatus according to claim 9 further comprising a liquid toner dispenser.

17. An electrophotographic imaging process comprising;

(a) applying an electrical charge to a surface of an organophotoreceptor comprising an electrically conductive substrate and a photoconductive element on the electrically conductive substrate, the photoconductive element comprising

(i) a charge transport material having the formula



where n is an integer between 2 and 6, inclusive;

R₁ and R₂ are, independently, H, halogen, carboxyl, hydroxyl, thiol, cyano, nitro, aldehyde group, ketone group, an ether group, an ester group, a carbonyl group, an alkyl group, an alkaryl group, or an aryl group;

X is a linking group having the formula $-(CH_2)_m-$, branched or linear, where m is an integer between 0 and 20, inclusive, and one or more of the methylene groups can be optionally replaced by O, S, C=O, O=S=O, urethane, urea, an ester group, a NR₃ group, a CHR₄ group, or a CR₅R₆ group where R₃, R₄, R₅, and R₆ are, independently, H, an alkyl group, an alkaryl group, a heterocyclic group, or an aryl group;

Y comprises a bond, C, N, O, S, a branched or linear $-(CH_2)_p-$ group where p is an integer between 0 and 10, an aromatic group, a cycloalkyl group, a heterocyclic group, or a NR₇ group where R₇ is hydrogen atom, an alkyl group, or aryl group, wherein Y has a structure selected to form n bonds with the corresponding X groups; and

Z is a fluorenylidene group; and

(ii) a charge generating compound.

(b) imagewise exposing the surface of the organophotoreceptor to radiation to dissipate charge in selected areas and thereby form a pattern of charged and uncharged areas on the surface;

(c) contacting the surface with a toner to create a toned image; and

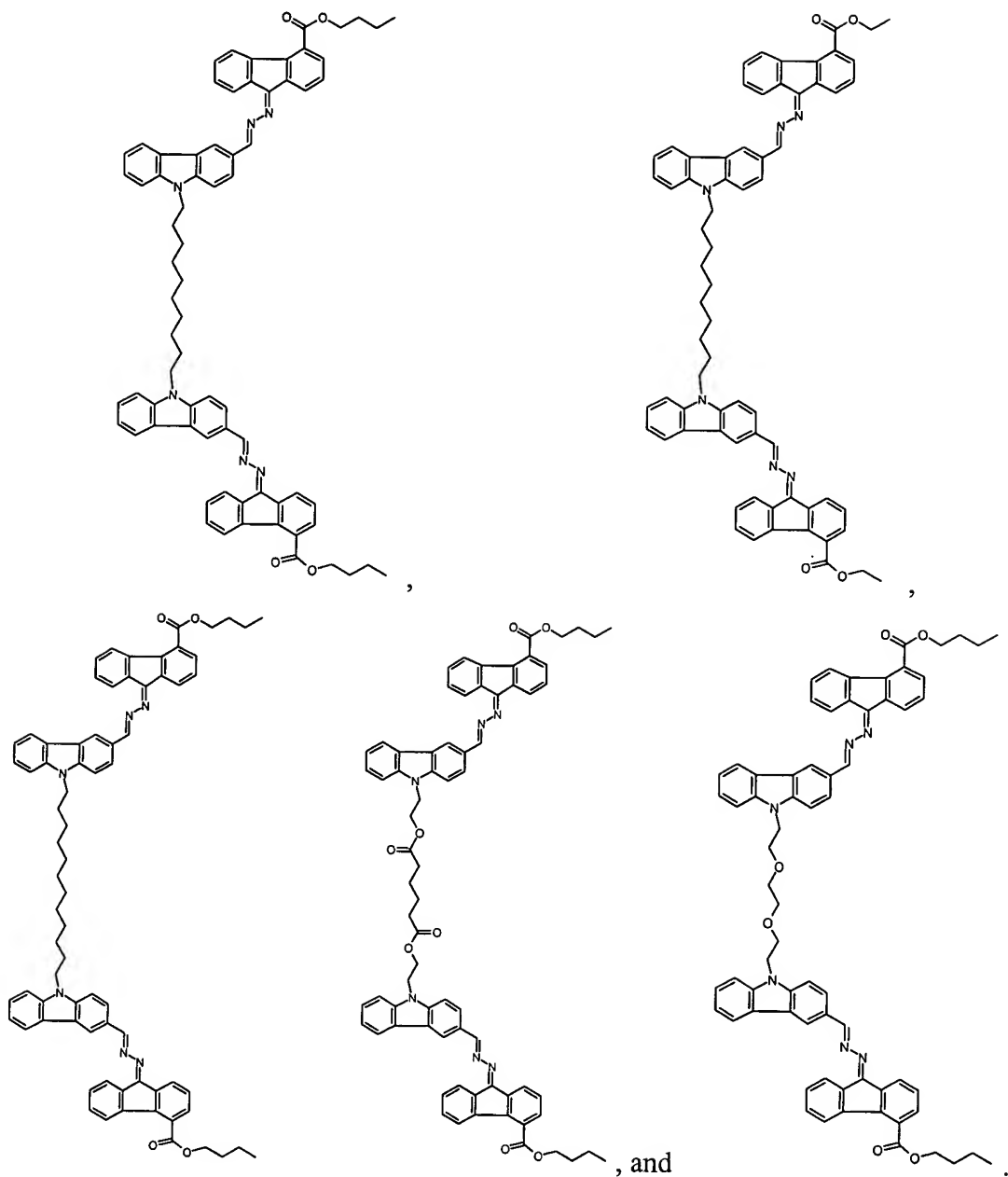
(d) transferring the toned image to substrate.

18. An electrophotographic imaging process according to claim 17 wherein Y is a bond and X is a $-(CH_2)_m-$ group where m is an integer between 1 and 20.

19. An electrophotographic imaging process according to claim 17 wherein Z is an alkoxycarbonyl-9-fluorenylidene group.

20. An electrophotographic imaging process according to claim 19 wherein the alkoxy group in the alkoxycarbonyl-9-fluorenylidene group contains 1 to 20 carbon atoms.

21. An electrophotographic imaging process according to claim 17 wherein the charge transport material has a formula selected from the group consisting of the following:



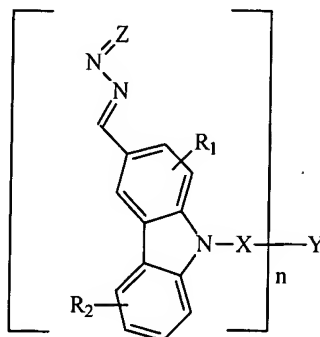
22. An electrophotographic imaging process according to claim 17 wherein the
5 photoconductive element further comprises a second charge transport material.

23. An electrophotographic imaging process according to claim 22 wherein the
second charge transport material comprises a charge transport compound.

24. An electrophotographic imaging process according to claim 17 wherein the photoconductive element further comprises a binder.

25. An electrophotographic imaging process according to claim 17 wherein the toner comprises a liquid toner comprising a dispersion of colorant particles in an organic liquid.

26. a charge transport material having the formula



where n is an integer between 2 and 6, inclusive;

R₁ and R₂ are, independently, H, halogen, carboxyl, hydroxyl, thiol, cyano, nitro, aldehyde group, ketone group, an ether group, an ester group, a carbonyl group, an alkyl group, an alkaryl group, or an aryl group;

X is a linking group having the formula -(CH₂)_m-, branched or linear, where m is an integer between 0 and 20, inclusive, and one or more of the methylene groups can be optionally replaced by O, S, C=O, O=S=O, urethane, urea, an ester group, a NR₃ group, a CHR₄ group, or a CR₅R₆ group where R₃, R₄, R₅, and R₆ are, independently, H, an alkyl group, an alkaryl group, a heterocyclic group, or an aryl group;

Y comprises a bond, C, N, O, S, a branched or linear -(CH₂)_p- group where p is an integer between 0 and 10, an aromatic group, a cycloalkyl group, a heterocyclic group, or a NR₇ group where R₇ is hydrogen atom, an alkyl group, or aryl group, wherein Y has a structure selected to form n bonds with the corresponding X groups; and

Z is a fluorenylidene group.

27. A charge transport material according to claim 26 wherein Y is a bond and X is a $-(CH_2)_m-$ group where m is an integer between 1 and 20.

28. A charge transport material according to claim 26 wherein Z is an alkoxycarbonyl-9-fluorenylidene group.

29. A charge transport material according to claim 28 wherein the alkoxy group in the alkoxycarbonyl-9-fluorenylidene group contains 1 to 20 carbon atoms.

30. A charge transport material according to claim 26 wherein the charge transport material has a formula selected from the group consisting of the following:

